



PATENT  
Customer No. 22,852  
Attorney Docket No. 06502.0054-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Ann M. WOLLRATH et al.	)	Group Art Unit: 2162
	)	
Application No.: 10/015,801	)	Examiner: J. Fleurantin
	)	
Filed: December 17, 2001	)	
	)	
For: METHOD AND APPARATUS FOR	)	Confirmation No.: 1256
TRANSPORTING BEHAVIOR IN	)	
AN EVENT-BASED	)	
DISTRIBUTED SYSTEM	)	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**AMENDMENT AND RESPONSE TO OFFICE ACTION**

In reply to the Office Action mailed December 30, 2005, the period for response to which extends through March 30, 2006, please amend the above-identified application as follows:

**Amendments to the Claims** are reflected in the listing of claims in this paper.

**Remarks** follow the amendment sections of this paper.

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1-4. (Canceled)

5. (Previously Presented) A distributed computer system comprising:

a first virtual machine;

a second virtual machine executing a process that receives, from the first virtual machine, a registration of interest in an event and transmits a message in response to the event, the registration of interest and the message including computer code; and

a third virtual machine for receiving the message and executing the computer code.

6. (Previously Presented) The distributed system of claim 5, wherein the message transmitted by the second virtual machine is a generic notify method.

7. (Previously Presented) The distributed system of claim 5, wherein the registration of interest by the second virtual machine includes an identification of the event and an identification of the third virtual machine.

8. (Previously Presented) The distributed system of claim 5, wherein each said virtual machine is stored on a separate computer system.

9. (Previously Presented) The distributed system of claim 5, wherein the computer code is implemented in an object.

10-13. (Canceled)

14. (Previously Presented) The distributed computer system of claim 5, wherein the event includes a change in system state.

15. (Previously Presented) The distributed computer system of claim 5, wherein the event includes one selected from the group consisting of a timer event, a mouse click event, and a disk access event.

16. (Previously Presented) The distributed computer system of claim 5, wherein each said virtual machine is contained in a separate memory.

17. (Previously Presented) The distributed computer system of claim 5, wherein each said virtual machine is run by a separate processor.

18. (Previously Presented) A distributed computer system comprising:  
a first virtual machine for transmitting a registration of interest in an event, the registration including computer code;  
a second virtual machine for transmitting a message including the computer code in response to the event; and

a third virtual machine for executing the computer code transmitted in the message.

19. (Previously Presented) A method for executing computer code in a distributed computer system comprising:

receiving a registration of interest in an event, the registration including computer code;

transmitting a message including the computer code in response to the event; and

executing the computer code transmitted in the message.

20. (Previously Presented) A method for executing computer code in a distributed computer system comprising:

receiving from a first virtual machine a registration of interest in an event, the registration including computer code;

transmitting from a second virtual machine a message including the computer code in response to the event; and

executing on a third virtual machine the computer code transmitted in the message.

21. (Previously Presented) A method for sending event notifications in a system comprised of at least two entities, the method comprising:

providing, by a first one of the entities to a second one of the entities, a message including a registration object characterized as an object having closure;

the second entity using the message to register an interest to notify an entity upon occurrence of an event;

monitoring by the second entity for occurrence of the event; and

providing by the second entity to another entity a notification upon occurrence of the event,

whereby the first entity is not aware of functions available to the entity provided with the notification due to the closure of the registration object.

22. (Currently Amended) A computer object configured to operate on a machine, wherein the computer object comprises:

a method; and

parameter data corresponding to the method, wherein:

the method and parameter data are adapted to be passed to [[a]] said machine as part of an event registration message,

the event registration message further includes event information identifying the event of interest and software information identifying a software entity to be notified upon occurrence of the event, and

upon occurrence of the event, the method and parameter data execute to pass at least one of the computer object and reference to the computer object to the software entity.

**REMARKS**

In the Office Action<sup>1</sup>, the Examiner rejected claims 5-9 and 14-22 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,378,001 by Aditham et al. ("*Aditham*") in view of U.S. Patent No. 6,314,467 by Hirasawa et al. ("*Hirasawa*"). The Examiner also objected to claim 22 for a minor informality.

By this Amendment, Applicants have amended claim 22 to read "said machine". Claims 5-9 and 14-22 remain pending in this application.

**I. Regarding the rejection of claims 5-9 and 14-22 under 35 U.S.C. § 103(a) as being unpatentable over *Aditham* in view of *Hirasawa***

Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 5-9 and 14-22 because a *prima facie* case of obviousness has not been established with respect to these claims.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). M.P.E.P. § 2142, 8th Ed., Rev. 2 (May 2004), p. 2100-128.

A *prima facie* case of obviousness has not been established because, among other things, neither *Aditham* nor *Hirasawa*, taken alone or in combination, teach or suggest each and every element recited by Applicants' claims.

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<sup>1</sup> The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

Claim 5 recites a combination including, for example:

a second virtual machine executing a process that receives, from the first virtual machine, a registration of interest in an event and transmits a message in response to the event, the registration of interest and the message including computer code; and  
a third virtual machine for receiving the message and executing the computer code.

(emphasis added). *Aditham* does not teach or suggest at least these elements.

*Aditham* teaches application programs, 12-1 to 12-N, that may communicate by means of a manager 10 (col. 4, lines 5-9 and 24-27). The programs “communicate with session object 18 by means of ‘messages’” (col. 4, lines 63-64). In *Aditham*, “the registered interest for each program in the session 18 is checked to determine programs which want to receive messages of the message 20 type” (col. 9, lines 3-5). However, *Aditham* teaches this process is used “to transfer a message 20 from a first program 12-1 to a second program 12-2” (col. 8, lines 58-60). Once the second program 12-2 receives this message, there is no teaching that that program 12-2 “transmits a message in response to the event”, as recited in claim 5. In fact, *Aditham* does not teach that the second program 12-2 transmits any information or message to third program 12-3. Rather, *Aditham* explicitly teaches message transfer “from a first program 12-1 to a second program 12-2” (col. 8, lines 58-60). Therefore, because program 12-2 does not “transmit a message in response to the event”, there is no “third machine for receiving the message and executing the computer code”.

*Hirasawa* does not cure the deficiencies of *Aditham*. *Hirasawa* teaches a system comprising “more than one data sending equipment...more than one data receiving equipment...and a communication satellite 1” (col. 6, lines 64-66). “The broadcasting

system 128 is a control unit for controlling a broadcasting using the communication satellite 1, and connected to the broadcasting equipment 134 for sending broadcast radio waves to the communication satellite 1" (col. 8, lines 3-7).

In *Hirasawa*, communication occurs via radio waves. No computer code is transmitted. Rather, content code is defined and created (col. 12, line 40). Even assuming, absent any teaching in *Hirasawa*, that content code could be considered computer code, the content code is not included in a message that is sent from a second virtual machine to a third virtual machine. Fig. 1 of *Hirasawa* depicts data receiving equipment 20-1 that receives data from data sending equipment 10-1. The sending and receiving equipment does not teach a first, second, and third virtual machine. Furthermore, none of the equipment receives "an interest in an event" as recited in claim 5. Therefore, *Hirasawa* also does not teach "a second virtual machine executing a process that receives, from the first virtual machine, a registration of interest in an event and transmits a message in response to the event, the registration of interest and the message including computer code; and a third virtual machine for receiving the message and executing the computer code" as recited in claim 5.

In addition, the references themselves contain no suggestion or motivation to modify or combine them. *Aditham* teaches "a collaboration manager 10 [that] may have one or more sessions running...[and] [p]rograms 12-1 to 12-3 may collaborate in one or more of a plurality of concurrently running sessions" (col. 5, lines 14-18). This collaboration occurs between computers interconnected to a network 195 via a bus 191 (col. 3, lines 62-67). In contrast, *Hirasawa* teaches sending and receiving data using a communication satellite (col. 6, lines 63-67). This communication occurs via radio



waves (col. 8, lines 5-7). One of ordinary skill would not have been motivated to combine data distribution between computers via a bus with satellite communication via radio waves at least because the satellite communication in *Hirasawa* could not be used in the data distribution via a bus in *Aditham*.

Furthermore, one skilled in the art would only arrive at the present claimed invention by consulting Applicant's disclosure, yet "[t]he teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." M.P.E.P. § 2142, internal citations omitted. Relying on the Applicants' own disclosure in an attempt to provide some teaching or suggestion to combine *Aditham* and *Hirasawa* constitutes improper hindsight reasoning.

Because the cited references fail to teach or suggest the subject matter of claim 5 and dependent claims 6-9 and 14-17, and, further, fail to provide motivation or suggestion to combine, no *prima facie* case of obviousness has been established with respect to these claims. Independent claims 18-22, while of different scope, recite limitations similar to those in claim 1 and are thus allowable over *Aditham* and *Hirasawa* for at least the same reasons discussed above in regard to claim 5.

## **II. Conclusion**

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge  
any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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GARRETT & DUNNER, L.L.P.

Dated: March 29, 2006

By:   


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